

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Amendment of Parts 2, 25, and 73 of the)	
Commission's Rules to Implement Decisions)	
from the World Radiocommunication)	ET Docket No. 04-139
Conference (Geneva, 2003) (WRC-03))	
Concerning Frequency Bands Between)	
5900 kHz and 27.5 GHz and to Otherwise)	
Update the Rules in this Frequency Range)	

COMMENTS

Final Analysis Communication Services, Inc. ("Final Analysis"), by its counsel, hereby submits these comments in response to the Commission's *Notice of Proposed Rulemaking* ("*NPRM*") in the above-captioned docket.¹ These comments are limited to the proposals concerning the domestic Little LEO feeder link allocations at 1390-1392 MHz (uplinks) and at 1430-1432 MHz (downlinks).² For the reasons set forth below, Final Analysis strongly opposes the proposal to amend the Table of Frequency Allocations entries in Section 2.106 of the Commission's rules to change the allocation status of the current domestic Little LEO feeder link allocations (uplinks at 1390-1392 MHz and downlinks at 1430-1432 MHz) from co-primary to secondary.

¹ Amendment of Parts 2, 25, and 73 of the Commission's Rules to Implement Decisions from the World Radiocommunication Conference (Geneva, 2003) (WRC-03) Concerning Frequency Bands Between 5900 kHz and 27.5 GHz and to Otherwise Update the Rules in this Frequency Range, ET Docket No. 04-139, *Notice of Proposed Rulemaking*, FCC 04-74 (released Mar. 31, 2004). The *NPRM* was published in the Federal Register on June 16, 2004 at 69 Fed. Reg. 33698.

² See *NPRM* ¶ 97.

I. THE CONTINGENCIES SPELLED OUT IN FOOTNOTE US368 HAVE BEEN MET AND THE DOMESTIC CO-PRIMARY ALLOCATION IS EFFECTIVE

In the *27 Megahertz R&O*, the Commission allocated the 1390-1392 MHz and 1430-1432 MHz bands on a co-primary basis to Little LEO feeder links contingent on the occurrence of three events, which were spelled out in footnote US368: (1) completion of sharing studies, including the measurement of emissions from equipment that would be deployed in operational systems as called for in Resolution 127 (WRC-2000); (2) adoption of worldwide feeder link allocations at WRC-03; and (3) compliance with any technical and operational requirements imposed at WRC-03 to protect passive services in the 1400-1427 MHz band.³

The first contingency was satisfied when tests, measurements and studies were completed by a U.S. laboratory and submitted on the eve of WRC-03 in a U.S. document that sought support of the U.S. proposal, known as WRC-03 Agenda Item 1.16, to obtain additional worldwide allocations for Little LEO feeder links in the 1390-1392 MHz and 1430-1432 MHz bands.⁴ These study results demonstrated the practicability of implementing a spaceborne transmitter and earth station transmitter that can attenuate unwanted emissions in excess of what is required to protect the passive services in the band 1400-1427 MHz from non-GSO narrow-band feeder links operating in the nearby bands 1390-1392 MHz (Earth-to-space) and 1430-1432 MHz (space-to-Earth).⁵ The U.S. delegation, in effect, approved these study results as satisfying the sharing studies contingency imposed in US368 when it submitted the study at WRC-03 as a U.S.-sponsored document.

³ Reallocation of the 216-220 MHz, 1390-1395 MHz, 1427-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands, *Report and Order and Memorandum Opinion and Order*, 17 FCC Rcd 368, 391-394 (¶¶ 48-60) (2002) (“*27 Megahertz R&O*”).

⁴ The study results were submitted to WRC-03 within WRC03/38 Addendum 1 and WRC03/38 Addendum 2.

⁵ *Id.*

The second contingency was satisfied when the secondary allocation, as specified in footnote 5.339A, was adopted at WRC-03.⁶ The third contingency is satisfied by making any Little LEO system filing an application for domestic use of these bands subject to decisions taken at WRC-07, including any provisions for the protection of other services to which the bands are allocated and of passive services in the adjacent band.⁷

It also is critical to understand that the secondary allocation adopted at WRC-03 was adopted in the absence of any consideration by other Administrations of the U.S. submitted study results. Because the sharing studies were not finalized until the eve of WRC-03, other Administrations did not have sufficient time and technical experts available to review the findings and independently concur that the proposed allocations would not cause interference to other allocated services and to passive services in the adjacent band. Given the strength of the results and U.S. support, Final Analysis believes that had the U.S. brought its position forward sooner, the WRC-03 allocations would have been on a primary basis.

Final Analysis continues to participate in the ITU-R study groups that support this allocation. Certain studies identified in Annex 1 of Resolution 745(WRC-03) have been completed and have produced positive results. Final Analysis intends to work with the study groups on the compatibility issues and also seek a U.S. proposal for WRC-07 to upgrade the worldwide allocation for these bands to primary status. Given that the required ITU-R studies on compatibility will be completed before WRC-07 and the accompanying probability that the

⁶ Footnote 5.339A reads as follows: “Additional allocation: the band 1390-1392 MHz is also allocated to the fixed-satellite service (Earth-to-space) on a secondary basis and the band 1430-1432 MHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis. These allocations are limited to use for feeder links for non-geostationary-satellite networks in the mobile-satellite service with service links below 1 GHz, and Resolution 745 (WRC-03) applies.” See *NPRM* n.149.

⁷ See Resolution 745 (Com5/14) (WRC-03), *resolves* 1 and 2.

international allocations will be changed to primary status, it makes no sense to downgrade the domestic allocations to secondary now and have to change them back after the next WRC.

II. CHANGING THE CURRENT DOMESTIC ALLOCATION TO SECONDARY WOULD NOT SERVE THE PUBLIC INTEREST

The current allocation for the 1390-1392 MHz and 1430-1432 MHz bands was made specifically to ensure the spectrum would be available for use by all interested users, including eventually for Little LEO feeder links. Upon consideration of various options and comments, the Commission carefully crafted an allocation plan for these bands that would satisfy the needs of all interested groups and allow each of the user groups “to mutually coexist and provide services with minimal potential for harmful interference.”⁸ Specifically, the current plan, which allocates the spectrum on a co-primary basis to each user group, would allow Little LEO satellite systems to successfully co-exist with terrestrial users in the same band by requiring the licensees to coordinate operations.⁹ The co-primary allocation and coordination requirement provides sufficient interference protection to both existing and future operations of the allocated services. As the Commission found, the current allocation “best accommodate[s] the needs of all parties interested in this band . . . [and maximizes] the efficient use of scarce spectrum resources.”¹⁰

In the instant proceeding, the Commission proposes to undo this carefully crafted plan by changing the allocation status of the Little LEO feeder link allocations in the 1390-1392 MHz and 1430-1432 MHz bands from co-primary to secondary, ostensibly for the sole purpose of making the domestic allocation status conform to the international status. Taking such action now is unnecessary and impractical. The most relevant consideration, however, is that changing

⁸ 27 *Megahertz R&O* at 391 (¶ 48).

⁹ *Id.* at 392 (¶ 53). The allocation plan also requires new licensees to protect incumbent Federal Government licensees. *Id.* at 391 (¶ 48).

¹⁰ *Id.* at 394 (¶ 60).

the priority status of these bands from co-primary to secondary for Little LEO feeder links would not serve the public interest because it would effectively preclude the use of these bands by the Little LEO industry for feeder link operations, making the allocation less efficient.

Feeder links are critical to the commercial implementation of Little LEO service because feeder links support data transfers and Tracking, Telemetry & Command (TT&C) functions between earth stations and the satellites. Feeder link transmissions require both continuous communication with the satellite, as well as sufficient dedicated spectrum in both uplink and downlink directions to ensure proper operation of the satellite constellation and to achieve full system capacity.¹¹

Given the importance of feeder links to Little LEO operations and that feeder link operations initially will be confined to a limited number of domestically-located ground stations, it is critical that the domestic allocation status of the 1390-1392 MHz and 1430-1432 MHz bands for Little LEO feeder link operations remains co-primary. A co-primary allocation ensures that new licensees will have equal status with other primary users, and will enjoy interference protection from subsequent users that have primary service requirements. In contrast, a secondary allocation would subordinate a new Little LEO licensee, not only to existing primary service users, but also to subsequent ones.¹² Thus, if the allocation status was changed to secondary, then the Little LEO feeder link operations would be required to accept interference from and not cause interference to the primary status users, even future ones, which in most circumstances would require that the Little LEO ground station be relocated. Apart from the

¹¹ As the Commission has long acknowledged, each Little LEO system requires dedicated feeder link spectrum for both uplink and downlink communications. *See* Amendment of Part 25 of the Commission's Rules to Establish Rules and Policies Pertaining to the Second Processing Round of the Non-Voice, Non-Geostationary Mobile Satellite Service, *Report and Order*, 13 FCC Rcd 9111, 9130 (¶ 48) (1997).

¹² *See* 47 C.F.R. § 2.104(d)(3).

expense, the time it would take to obtain approval for and construct a new ground station would create serious and unacceptable disruptions to Little LEO service. Under these circumstances, it would be impractical to use these bands for Little LEO feeder link operations. Consequently, changing the allocation status to secondary would effectively preclude the use of these bands for Little LEO feeder link operations. In contrast, preserving the existing allocation status would not harm any other allocated service.

Finally, Final Analysis does not oppose the proposed revisions to footnote US368,¹³ provided that the Commission clarifies that an applicant can apply for and obtain authority for domestic use of these bands on a co-primary basis for Little LEO feeder link operations prior to WRC-07, so long as the requirements of US368 are otherwise met.

III. CONCLUSION

For the reasons stated above, Final Analysis strongly opposes the Commission's proposal to amend the Table of Frequency Allocations entries in Section 2.106 of the Commission's rules to change the allocation status of the current domestic Little LEO feeder link allocations from co-primary to secondary.

Respectfully submitted,
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By: /s/

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¹³ *NPRM* ¶ 97.